Matrix 1500

Christie's Matrix Series – Synonymous with Simulation

Christie's new Matrix Series simulation solutions are purpose-built projectors designed to meet the specific requirements of the simulation market. As technologies change and the demands of the simulation and training markets increase, the need for lower cost simulation systems with higher resolution and higher brightness is prevalent.

The Matrix 1500 is a purpose-built entry level single-chip DLP™ projector. With a powerful 1500 ANSI lumens, the Matrix 1500 allows users to work in daytime simulation environments, in full ambient light. Images on-screen are depicted with the precise clarity of true SXGA resolution (1280x1024) with Dark Metal DMD™ panels for a true digital end-to-end solution. The SuperCR™ 1000:1 full field contrast ratio ensures the accurate reproduction of night-mode scenery. The sealed optical engine (SOE™) ensures dust-free operation. It is based on a double data rate (DDR) interface between the controller and DMD, which reduces color sequential artifacts, "spatial contouring" artifacts and dither noise in dark images.

Compatible with all most-used source resolutions, the Matrix 1500 can connect to virtually every computer or video source. With Minimum Processing Latency (MPL™), less than one frame delay enables extremely fast simulator response time to user's commands providing sharp, vibrant images without loss of detail, flicker or motion artifacts.

The Matrix 1500 is quick to set up with an intuitive GUI and virtual plug and play operation with a universal power supply that auto adjusts. Christie's Digital Color Management (DCM™) system offers a specially designed color wheel with very tight +/- 5 nm tolerance for primary colors and together with the Custom Gamma Adjustment (CGA™) ensure the true color representation, color matching and uniformity across multi-screen images in simulation applications.

Compact and quiet at only 28dB, the Matrix 1500 can work in any simulation environment – and 2000 hours typical lamp life provides reliability and a lower cost of operation. Ruggedized to withstand 3G vibrations in all three axes, Christie's Matrix 1500 is the reality for simulation.

- 1500 ANSI lumens
- SuperCR™ 1000:1 on/off contrast ratio
- True SXGA resolution (1280x1024) with dark metal DMD
- Digital Color Management (DCM™) for RGB color matching across multiple screens
- Custom Gamma Adjustment (CGA™)
- Minimum Processing Latency (MPL™) of less than one frame
- Remote diagnostics and control via RS232 and optional ChristieNET™ networking
- 250W UHP lamp with 2000 hrs of rated lamp life
- Sealed Optical Engine (SOE™) for dust-free operation
- Optional zoom lens and accessories
- Universal 90 to 260 V AC for world-wide operation
- Whisper-quiet 28dB operation
- 3G operating vibration specification in all three axes
- Compact 6.5 lbs (3 kg) lightweight design

APPLICATIONS

- Aircraft, ship's bridge and land vehicle simulators
- Driver training
- Air Traffic Control simulators
- Design simulators
- Architecture, engineering and construction
- Research and development
- Military training
- Entertainment

CHRISTIE

Project. Present. Perform.

Matrix 1500 • Specifications

Brightness
- 1500 ANSI lumens

Contrast Ratio
- Super CR™: 1000:1 Full Field

Resolution
- Single-chip DMD™ Optical System featuring new Dark Metal (DM3) DMD™ for improved black level and contrast ratio
- True SXGA 1280 x 1024 chip resolution without any convergence errors
- 8-bit digital color processing
- 16.7 million displayable colors
- 13-bit user selectable gamma table

Purpose-built Simulation Features
- Digital Color Management (DCM™) for RGB color matching across multiple screens through individual RGB color adjustments and special color wheel with +/- 5 nm tight primary color tolerance
- Custom Gamma Adjustment (CGA™) features several gamma curves and gray scale tracking control
- Minimum Processing Latency (MPL™) of less than one frame
- Sealed Optical Engine (SOE™) for dust-free operation
- 3G operating vibration specification in all three axes
- Rigid cast magnesium (fully corrosion resistant) cabinet for high durability
- Color Temperature adjustment range from 5000K to 9300K

Source Compatibility and Digital Image Processing
- Compatibility with VGA, SVGA, XGA, SXGA, SXGA+ and UXGA
- Resizing processing for computers and workstations from VGA (640 x 480) up to UXGA (1600 x 1200) resolution
- Accepts composite video, S-video (Y/C), component video (YUV) and HDTV (YPbPr)
- Auto detects NTSC, NTSC 4.43, PAL, PAL M, PAL N, SECAM
- Faroudja™ DCDi®, 10-bit motion adaptive de-interlacing
- Automatic film detection mode with 3:2 and 2:2 pull down
- Separate, composite sync and sync-on-green compatible
- HDTV Tri-level sync compatible for various HDTV formats (1080i, 720p, 576i/p, 480i/p)
- User selectable aspect ratios 5:4, 16:9 and 4:3
- Digital horizontal and vertical keystone

Input Horizontal Frequency
- 15kHz to 120kHz

Input Vertical Frequency
- 50 Hz to 110 Hz

Dot Clock
- 205 MHz (Analog RGB)
- 165 MHz (Digital RGB: DVI-D)

Inputs
- HD15 (x2)
- DVI-D (x1)
- S-video Y/C (4-pin mini-DIN)
- Composite video (1 x RCA)
- Component video (3 x RCA)
- Audio (4 inputs for data and video sources, 3.5mm stereo mini-jacks)

Outputs
- Analog RGB HD15 (x1)
- Audio out (3.5mm stereo mini-jack)

Standard Lens
- Short throw fixed 1:1 lens (f/2.8, f=17.9 mm)
- Manual focus
- Rugged lens mount design

Optional Lens
- Optional zoom Lens: 1.75-2.25:1 (f/2.8-3.0, f=31.1-39.2 mm)
- Zoom ratio: 1.3x
- Projection distance: 5'-33' (1.5m –10m)
- Screen size 2.5' to 18' (0.7m – 5.5m)
- Flexibility of installations at various distances from the screen
- Fixed lens mount with manual focus and zoom adjustment

Enhanced Feature Set
- Front, rear and ceiling mount installation options
- Intuitive on-screen display (OSD) menus
- Service menu
- Multiple language support
- Auto set-up feature
- Volume control and mute

Control/Networking
- USB type B port for mouse and firmware upgrades
- RS232 communication port via DB9 connector
- IR Remote multi-function keypad with direct key controls, mouse and laser pointer
- Front and rear IR receivers
- Built-in keypad
- Optional ChristieNET™ networking for remote control, monitoring and diagnostics

Lamp Specification
- 250W UHP™ lamp from Philips
- 2000 hours of rated lamp life
- User replaceable lamp
- Pre-aligned lamp module

Power Requirements
- Universal voltage range (auto-switching) 90-260V AC
- Line frequency: 50 - 60 Hz nominal
- Power consumption: 350 W typical, 400W maximum
- In-rush current rating: 50A maximum
- Current rating: 4 A maximum at 100-120 VAC, 2 A maximum at 200-240 VAC
- Thermal dissipation: 1375 BTU/hr maximum

Environmental
- Operating Temperature: 0 - 35° C (32-95° F)
- Storage Temperature: -30 - 60° C (-22-140° F)
- Operating Humidity: 20 - 90% non-condensing
- Storage Humidity: 0 - 90% non-condensing
- Acoustic noise level 28 dB achieved with a proprietary air flow and fan system

Diagnostics
- Built-in diagnostic LED
- Lamp life warning indicator
- Full remote diagnostics through RS232 9-pin D connector

Size and Weight
- Size: 9.6" L x 10.9" W x 3.5" H (244mm L x 278mm W x 88mm H)
- Weight: 6.5 lbs (3 kg)

Standard Accessories
- IR Wireless Remote Keypad (with two "AAA" type batteries included)
- User Manual with Warranty Registration Card
- Computer HD15 RGB cable
- DVI-D cable
- Composite video cable
- S-video cable
- Audio cable
- USB cable
- Lens Cover
- AC cord (US and European versions)
- Soft-sided carrying case
- Cable cover for ceiling mount installations

Optional Accessories
- Replacement lamp module
- Service Manual
- Transit case
- Optional zoom lens 1.75-2.25:1
- ChristieNET™ Networking

Regulatory Approvals
- Safety: CSA C22.2 No. 950, UL 1950, EN609050 European Norm "Safety of Information Technology Equipment"
- Complies with relevant worldwide EMC and safety standards
- The product complies with FCC class A and EN55022 Class A requirements
- This product conforms to all relevant European directives, standards, safety, health and environmental concerns and bares the CE marking

Warranty
- Projector warranty: 15 months parts and labor
- Lamp warranty: 120 days
- Accessories: One year

Also in the Matrix Series

Matrix 2500

Matrix 3500

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PICTURE BY DLP A TEXAS INSTRUMENTS TECHNOLOGY

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Due to constant research, specifications are subject to change without notice.

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